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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,966	07/26/2001	Joseph Donald Runzo	4013-82954	8324

24628 7590 05/01/2007

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EXAMINER	
NGUYEN BA, HOANG VU A	
ART UNIT	**PAPER NUMBER**
2623	
MAIL DATE	**DELIVERY MODE**
05/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/915,966	RUNZO, JOSEPH DONALD	
	Examiner	Art Unit	
	Hoang-Vu A. Nguyen-Ba	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 July 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 July 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/26/01, 4/11/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the application filed July 7, 2001.

2. Claims 1-34 have been examined.

Priority

3. The priority date considered for this application is July 26, 2001.

Oath/Declaration

4. The Office acknowledges receipt of a properly signed oath/declaration filed July 26, 2001.

Information Disclosure Statement

5. The Office acknowledges receipt of the Information Disclosure Statements filed July 26, 2001 and April 11, 2007. They have been placed in the application file and the information referred to therein has been considered.

Drawings

6. The drawings filed on July 26, 2001 are objected because they are informal and are acceptable for examination only. Formal drawings are required.

Specification

7. The specification is objected to because of the following minor informalities:

a. p. 6, 2nd line of the 1st ¶ of the section "Detailed Description of the Invention", after "The use of definite or indefinite articles" the term "in" should be changed to – is -;

b. p. 12, line 6, after "if the signal strength of the off-tuned frequency is lower", the conjunctive "that" should be changed to – than --.

Claim Rejections – 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejection under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States and was published under Article 21(2) of such treaty in the English language

9. Claims 1-7, 9-10, 12-18, 21, 24-26, 28-32 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,804,826 to Bush et al. ("Bush").

Claim 1

Bush discloses

a) tuning a radio frequency receiver to a carrier frequency of a selected RF *channel* (see at least 2:7-9, 46-51; 3:1-6, 33-36; 4:9-17)*;*

b) measuring a signal level of the carrier frequency (see at least 3:29-35, it is noted that in order to determine that the first signal is escaping, the signal magnitude has to be measured against a predetermined value; 3:46-50, 3:56 – 4:43)*;*

c) off-tuning the receiver by a predetermined offset (see at least 3:46 – 4:5; 4:27-43; 8:47 – 9:11)*;*

d) measuring a signal level of the off-tuned carrier frequency (see at least 3:29-35, it is noted that in order to determine that the first signal is escaping, the signal magnitude has to be measured against a predetermined value; 3:46-50, 3:56 – 4:43);

e) obtaining a signal level difference between the signal level of the carrier frequency and the signal level of the off-tuned carrier frequency to determine if interference exists (see at least 3:29-35, it is noted that in order to determine that the first signal is escaping, the signal magnitude has to be measured against a predetermined value; 3:46-50, 3:56 – 4:43);

f) declaring an interference condition if the signal level difference is less than a predetermined difference amount (see at least 1:52-53; 2:48-51; 3:50 – 4:43; 6:16-29; 8:47-60); *and*

g) providing an indication of the signal level of the carrier frequency to permit a determination of whether a signal leakage condition exists (see at least 1:51-53; 2:48-51; 3:50-55; 4:6-13; 26-43; 6:16-29).

Claim 24

Claim 24 is an independent claim that recites a system for validating signals and detecting signal leakage in a cable communications system, the cable communications system providing channel programming on a plurality of Rf channels, the system comprising:

a radio frequency receiver (see at least FIG. 8, device 304);

a computer operatively coupled to the receiver and to a display (see at least 8:15-37; e.g., the Trilithic, Inc. model SuperPlus™), *the receiver configured to* perform the method steps of Claim 1. Therefore, the rejection set forth in Claim 1 is deemed applicable to Claim 24.

Claim 2

The rejection of base claim 1 is incorporated. Bush further discloses *wherein the steps of measuring are performed by receiving signals corresponding to an existing* RF *carrier frequency, which signals egress from the cable communications system* (see at least 1:50-53; 2:48-51; 6:16-29; 8:47 – 9:58).

Claim 3

The rejection of base claim 1 is incorporated. Bush further discloses *wherein the steps of measuring are performed passively with no encoding or injecting of test signals into the selected* RF *channel or modifying the channel programming of the selected channel* (see at least 6:16-29; 8:47 – 9:58).

Claim 4

The rejection of base claim 1 is incorporated. Bush further discloses *wherein the steps (a) through (g) are continuously repeated* (see at least 6:16-29; it is noted the measurements need to be repeated continuously for each of the multitudes of circuits between subscribers in order to detect and locate the egress).

Claims 5 and 25

The rejection of base claims 1 and 24, respectively is incorporated. Bush further discloses *wherein the carrier frequency of the selected* RF *channel is between 108 MHz and 400 MHz* (see at least 9:30).

Claim 6

The rejection of base claim 1 is incorporated. Claim recites *wherein the carrier frequency is within a frequency spectrum designated for use by aircraft communication and aircraft navigation.* See rejection set forth in Claim 5.

Claims 7 and 26

The rejection of base claims 1 and 24, respectively is incorporated. Bush further discloses *wherein the receiver is off-tuned by between 5 kHz and 100 kHz from a center frequency of the carrier* (see at least 7:54 – 9:58).

Claims 9 and 28

Rejections of base claim 1 and intervening claim 7 and of base claim 24, respectively are incorporated. Bush further discloses *wherein the receiver is off-tuned to a frequency above the center frequency of the carrier* (see at least 8:38-60).

Claim 10

Rejections of base claim 1 and intervening claim 7 are incorporated. Bush further discloses *wherein the receiver is off-tuned to a frequency below the center frequency of the carrier* (see at least 8:38-60).

Claims 12 and 29

The rejection of base claims 1 and 24, respectively is incorporated. Bush further discloses *wherein the predetermined difference amount is 3 dB* (see at least 8:53-60; it is noted that 3 dB is equivalent to a ratio of 2, e.g., an increase amount of 3 dB in energy at the reference energy 2 KHz is equal to twice of the amount of energy at the reference frequency, e.g., energy of 4 KHz).

Claim 13

The rejection of base claim 1 is incorporated. Bush further discloses *validating the carrier frequency measurement if the signal level difference is not less than the predetermined difference amount* (see at least 8:47-60).

Claims 14 and 30

The rejection of base claims 1 and 24, respectively, is incorporated. Bush further discloses *wherein if the interference condition has not been declared, declaring a signal leakage condition if the signal level of the carrier frequency is greater than a predetermined leakage amount* (see at least 9:27-49).

Claims 15 and 31

The rejection of base claims 1 and 24, respectively, is incorporated. Bush further discloses *wherein if the interference condition has not been declared, providing an indication of the signal level of the carrier frequency so that a signal leakage condition can be determined* (see at least 3:56 – 4:43).

Claims 16 and 32

Rejections of base claim 1 and intervening claim 15 and of base claim 24, respectively, are incorporated. Bush does not specifically disclose *wherein the indication of the signal level of the carrier frequency is periodically updated.* However, this feature is deemed inherent to Bush because of the nature of the detection of signal leakage which is performed uninterrupted along a circuit from the head end to a subscriber's end, which requires the update of the detected value at each point of the circuit (2:46-51).

Claim 17

Rejections of base claim 1 and intervening claim 15 are incorporated. Bush does not specifically disclose *wherein the indication of the signal level of the carrier frequency is updated in real time.* However, this feature is deemed inherent to Bush because of the nature of the detection of signal leakage which is performed uninterrupted along a circuit from the head end to a subscriber's end, which requires the update in real-time of the detected value at each point of the circuit (2:46-51).

Claim 18

The rejection of base claim 1 is incorporated. Bush further discloses *providing an indication of the signal level of the carrier frequency so that a signal leakage condition can be determined* (see at least 3:56 – 4:43).

Claim 21

The rejection of base claim 1 is incorporated. Bush does not specifically disclose *wherein if the interference condition is detected, an alternate RF channel is chosen having a predetermined RF frequency spacing from the selected channel, and steps (a) through (g) are repeated.* However, this feature is deemed inherent to Bush because of the nature of the detection of signal leakage which is performed uninterrupted along a circuit from the head end to a subscriber's end, which requires the update of the detected value at each point of the circuit (2:46-51; 6:16-29; it is noted the measurements need to be repeated continuously for each of the multitudes of circuits between subscribers in order to detect and locate the egress).

Claim Rejections – 35 USC § 103

10. The following is a quotation of the 35 U.S.C. § 103(a) which form the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not negatived by the manner in which the invention was made.

11. Claims 8, 11, 19-20, 22-23, 27 and 33-34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,804,826 to Bush et al. ("Bush") in view of U.S. Patent No. 5,294,937 to Ostteen et al. ("Ostteen").

Claims 8 and 27

The rejection of base claims 1 and 24, respectively, is incorporated. Bush further discloses *wherein the receiver is off-tuned by between 100 kHz and 1 MHz from a center frequency of the carrier.* However, Ostteen discloses that the RF meter may be configured to measure signals in a broad spectrum of bandwidths (see at least 5:24-38). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Bush with Ostteen, as this would provide Bush with more versatility in the measurement of signal leakage.

Claim 11

The rejection of base claim 1 is incorporated. Bush does not specifically disclose *wherein at least one of the measured signal level of the carrier frequency and the measured signal level of the off-tuned carrier frequency are saved to facilitate obtaining the signal level difference.* However, Ostteen discloses that the data in RAM are saved every two minutes for the purpose of providing data backup to the computer system such that if power is lost,

no more than two minutes of data will be lost (see at least 7:33-60). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use this feature in Bush for the same purpose.

Claims 19 and 33

The rejection of base claims 1 and 24, respectively, is incorporated. Bush does not specifically disclose *wherein the signal leakage condition is determined to exist if the measured signal level of the carrier frequency is greater than the equivalent of 20 microvolts per meter.* However, Ostteen discloses that the monitoring program reads, extracts and stores in text files signal strength information pertaining to 4 different ranges, one of which is 20-49 microvolts/m (6:5-16). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use this feature of Ostteen in Bush because this feature would allow Bush to save the measured signal levels that are greater than 20 microvolts/m. Bush does not specifically disclose that the measurements are *measured at three meters.* However, Ostteen allows a user to enter predefined distances into the RF meter with function keys (8:28-35). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use this feature of Ostteen to set one function key to the value of "3 meters" so that measurements of signal leakage could be made at three meters.

Claims 20 and 34

The rejection of base claims 1 and 24, respectively, is incorporated. Bush does not specifically disclose *wherein the signal leakage condition is determined to exist if the measured signal level of the carrier frequency is greater than the equivalent of between 5 to 20 microvolts per meter measured at three meters.* However, Ostteen discloses that the monitoring program reads, extracts and stores in text files signal strength information

pertaining to 4 different ranges, one of which is 0-19 microvolts/m (6:5-16). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use this feature of Ostteen in Bush because this feature would allow Bush to save the measured signal levels that are between 5 to 20 microvolts/m. Bush does not specifically disclose that the measurements are *measured at three meters.* However, Ostteen allows a user to enter predefined distances into the RF meter with function keys (8:28-35). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use this feature of Ostteen to set one function key to the value of "3 meters" so that measurements of signal leakage could be made at three meters.

Claim 22

Since Claim 22 is an independent claim that recites all the limitations of Claim 1, the rejection set forth in Claim 1 is deemed applicable to Claim 22. Bush does not specifically disclose:

> *saving the measured signal level of the carrier frequency in memory* ;
>
> *saving the measured signal level of the off-tuned carrier frequency in memory.*

However, Ostteen discloses that the data in RAM are saved every two minutes for the purpose of providing data backup to the computer system such that if power is lost, no more than two minutes of data will be lost (see at least 7:33-60). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use this feature in Bush for the same purpose.

Claim 23

The rejection of base claim 22 is incorporated. Bush further discloses *wherein the signal leakage condition is determined to exist if the interference condition is not declared and the*

measured signal level of the carrier frequency is less than a predetermined leakage amount (see at least 8:45-60).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang-Vu "Antony" Nguyen-Ba whose telephone number is (571) 272-3701. The examiner can normally be reached on Tuesday-Friday from 7:05 am to 5:35 pm.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, John Miller can be reached at (571) 272-7353.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2600 Group receptionist (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

Hoang-Vu Antony Nguyen-Ba

April 24, 2007

ANTONY NGUYEN-BA
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